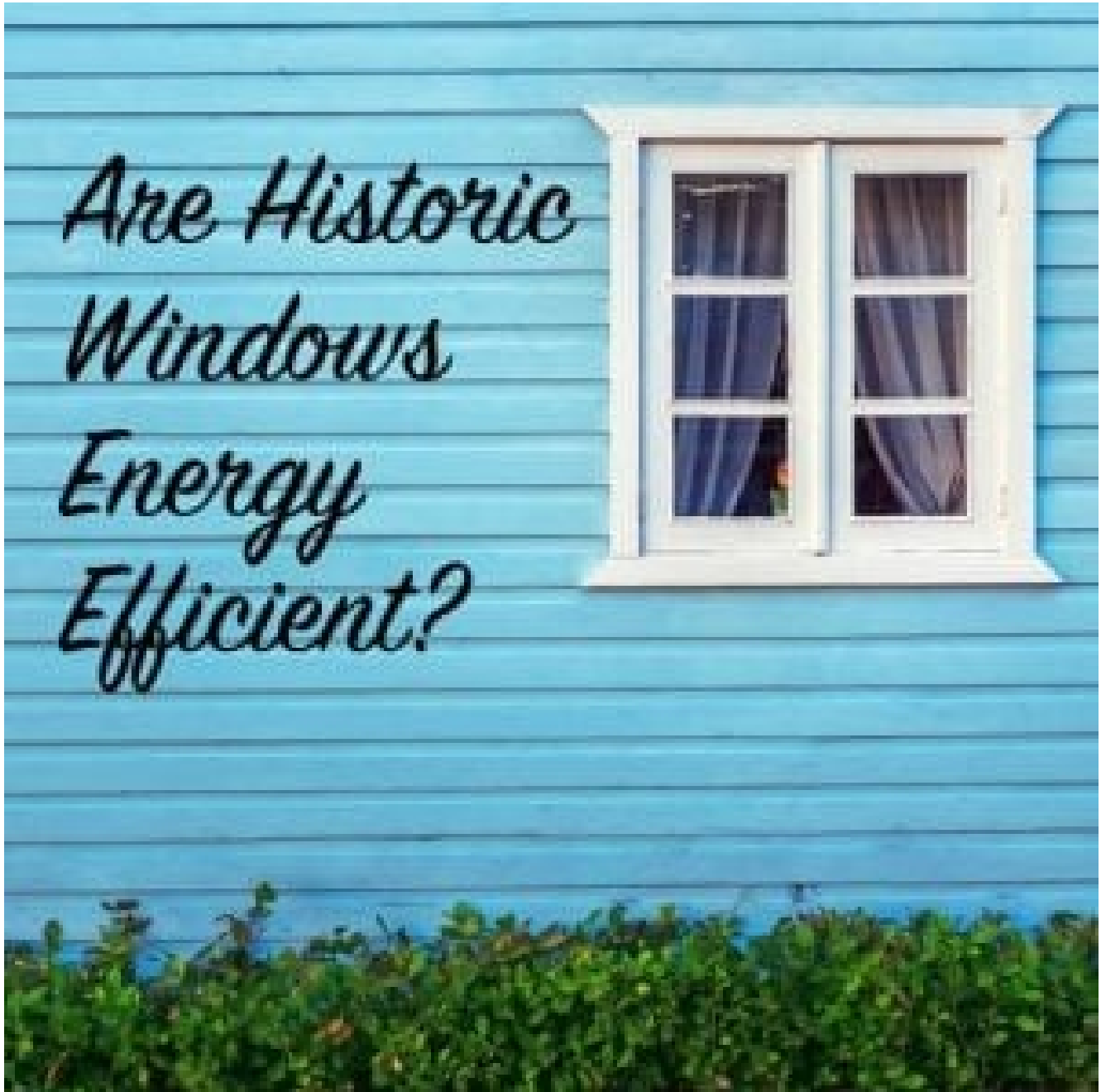


THE CRAFTSMAN

with Scott Sidler



This week, we're on to claim #2 of mine that is so often refuted by energy gurus, developers, and the replacement window industry. I'm going to take a wrecking ball to these ludicrous claims in this post, and in the next 10 minutes, show you irrefutable proof that an energy efficient old window is not a unicorn story spun by historic preservationists.

An energy efficient historic window is a very real and very attainable thing that can be accomplished by minimal upgrades to the original window that cost far less than replacement.

"Every single historical wood and steel window can be repaired and made to be as or more energy efficient than a replacement window."

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You see, the reason this one gets me so riled up is because windows are by far the most endangered pieces of historic buildings. They are being torn out and thrown away in the name of energy efficiency at a rate of over 30 million a year.

MY LATEST VIDEOS

with Scott Sidler



Not only is their removal and disposal a huge strain on our landfills, it is completely unnecessary. Here's why:

Marketing, Lobbying, & Dirty Tricks

The replacement window industry has done extensive testing and knows the facts about their products. They know that the windows they are selling are engineered with obsolescence in mind. They can market them as energy saving because initially they save energy over a neglected, un-weatherstripped original window even though, cradle to grave, they use way more energy.

In fairness, almost anything would save lots of energy compared to a beat up neglected old window (even an \$8 sheet of plywood would!) so it's not a high bar to beat. What they won't tell you is that a restored and weatherstripped window will save more net energy than a new replacement window.

Here's how the replacement window industry's game works:

They Show You Your Problem

They convince you you have a problem: The problem is two fold, your old window is drafty and inefficient, your old window requires maintenance. That appeals to the two most powerful marketing triggers to all humans, time and money.

They Solve Your Problem

They offer you a single product (a window) that solves both of these problems! Cut your energy bills and never have to maintain that window again. Amazing right? Wrong.

The Warranty

They promise you their product has a "lifetime warranty" which it does, but only on "non-glass materials". They don't tell you about the 10 or 20-yr warranty on the glass. That is buried in the fine print which only dorks like me dig up and share with smart readers like you.



A warranty is only as good as the weakest link, and their lifetime warranties don't stand up to scrutiny because they are technically only 10 to 20-yr warranties, due to the fact that if the glass fails, then the only solution is to replace the whole unit.

Maybe at this point you're thinking "Hey even 20 years is not a bad warranty." They aren't done with their dirty little tricks yet! That 20-yr warranty only covers materials, NOT labor, after only 2 years! Here's a little excerpt from **Pella's Warranty** on vinyl windows.

*"If Pella is given notice of a glass defect occurring within twenty (20) years of the date of sale by Pella or its authorized dealer, Pella shall, at its sole option: 1) repair or replace the defective glass (with cost of labor included **only within two [2] years of the date of sale** by Pella or its authorized dealer)"*

If you want a little more naked truth about their "lifetime warranty" on "non-glass materials" keep reading! The US Census Bureau reports that Americans move approximately 12 times in their lifetime. If the average lifespan is 79 years (which it is in 2017) then that means, on average, we move every 6 1/2 years. What does that have to do with the "lifetime warranty" though?

Well, to use Pella again, that "lifetime warranty" is non-transferrable. That means that as soon as you move, those windows are no longer warranted and ripe for full price replacement as soon as they fail.

Pella isn't stupid. They know these figures, and while they will honor a lifetime warranty on vinyl windows for the handful of people who live in their house for 20+ years, they know that most of their "lifetime warranties" will only have to be serviced for about 6 1/2 years. And anyone can make a window that can last that long.

And it's not just Pella, it's all the major window manufacturers who play this game. You can read more in my post [Replacement Windows: The Real Story](#). But, let's get back to the question at hand.

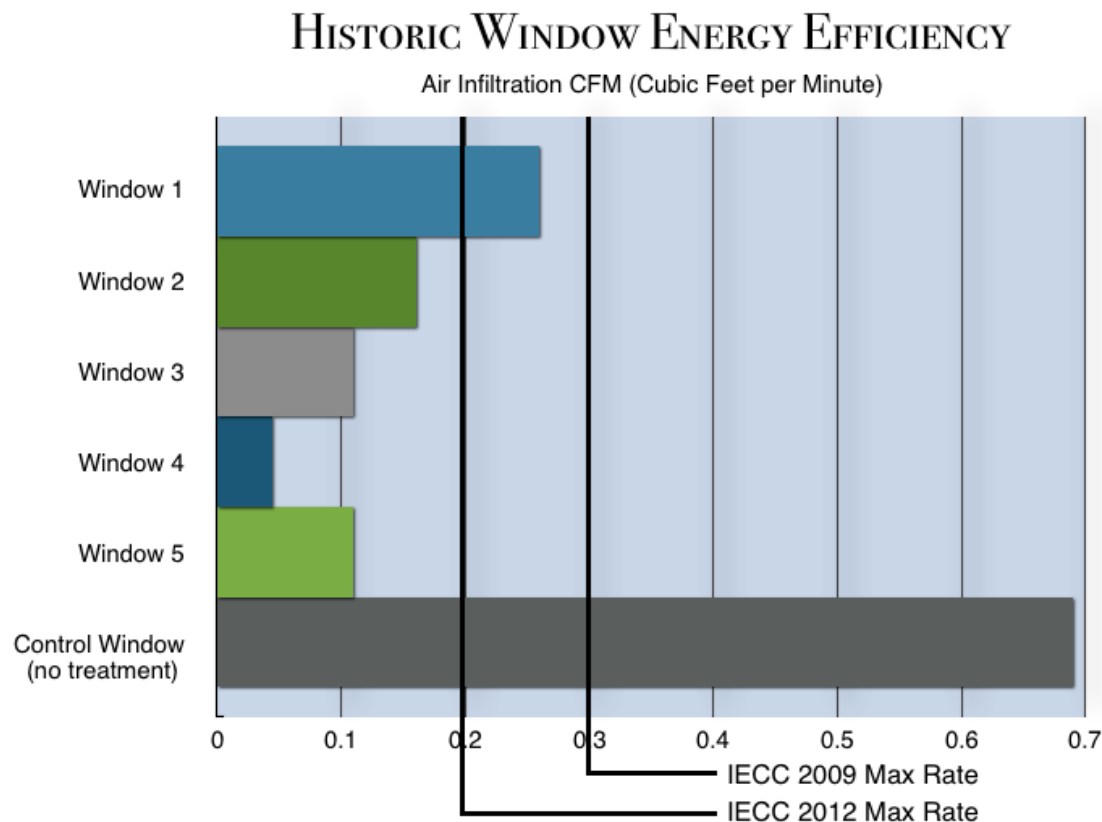
Are Historic Windows Energy Efficient?

For the answer, you don't need to listen to my opinions or the marketing hype from the replacement window industry. You need cold hard facts, not salespeople, so, here they are.

In 2011, the Window Preservation Standards Collaborative, a group of window restorers from all over the country, got together for their first summit to discuss this very topic. They had a hunch that historic windows were more efficient than the replacement industry was saying, but no one had ever done definitive unbiased testing.

The testing was performed by a third party certified by the Building Performance Institute, according to ASTM E1186-03 (2009) standards and the findings were astonishing! There were 5 different levels of efficiency upgrades tested and all of them exceeded to 2009 IECC energy requirements for windows. More than that, all but one exceeded the current 2012 IECC energy code requirements!

All of these windows were built in the 1930s and were single paned double-hung windows. The results are below:



- Window 1: Restored, added exterior wood storm window, no weatherstripping
- Window 2: Restored, added integrated metal weatherstripping, added exterior wood storm window with rubber gasket weatherstripping
- Window 3: Restored, added integrated metal weatherstripping, added exterior metal storm product
- Window 4: Restored, added rubber bulb weatherstripping to perimeter of sashes
- Window 5: Not restored, added site-made interior air panel (similar to interior storm window)
- Control Window: No improvements or upgrades



If you're not a believer in numbers and facts, then there is very little I can do for you, but this round of testing was the final nail in the coffin for replacement windows in my opinion. This shows that historic windows are indeed energy efficient.

Not to mention that you don't have to worry about 10, 20, or even 30-yr warranties with historic windows. They have already lasted 80, 100, 120+ years and they will continue to last another century with minimal care.

If you want to learn everything from the basic to advanced techniques for repairing, restoring, and weatherstripping historic windows, you can visit my resource page [How To: Repair Old Wood Windows](#).

Share Away!



with Scott Sidler

20 thoughts on “Are Historic Windows Energy Efficient?”



Jean Spencer says:

July 21, 2018 at 11:23 am

I am trying to find information on how to make old casement windows more energy efficient. I have a customer who wants to replace the glass with thicker glass to accomplish this. I'm not sure this will be effective. Do you have any information on making old casement windows more energy efficient? Thanks for all you do!

Reply



window factory direct long island says:

May 11, 2018 at 2:34 pm

Thank you for this great article. I've often wondered about what to look for in windows and look forward to reading the next blog on this topic.

<http://northeastwindowsusa.com/>

Reply



noel miller says:

March 31, 2018 at 2:09 pm

We are adding an addition to our hundred year old house and were planning on reusing some of the original double hung (with wood storms) windows from the wall that is being bumped out. Well the city is claiming they will not let us do this, since the windows are “single pane” and “not energy efficient”. We are planning on fighting this, and I was hoping you could supply me with a link to the actual Building Performance Institute study so that I could possibly supply it to back up my case. Thanks!

Reply



Charles says:

November 16, 2017 at 11:21 am

I have to respectfully disagree with the consensus. As an owner of an 1814 farm house fixer upper, I'm currently replacing the windows. I am trying to keep the look of the traditional build of the house and it is tasteful. But just a few of my thoughts. The craftsmanship the original builders put into the house was amazing. The jambs, sill and header are in relatively good shape and I was quite impressed on how they built the frame. The exterior casing is original but is pretty rotten in many area and stripping and scraping will just spread more lead dust everywhere. Really not worth saving.

The sashes have been extremely neglected by the previous owners. I understand I could repair them and replace the metal storms with nice wood ones. I decided to pay a small premium on Harvey wood replacements that are aluminum clad on the exterior.

Even though it pains me to remove the entire wood frame of the old windows, I don't really regret it. As I removed the siding and old frame, there was a severe void of blown in cellulose all around the jambs, sill and head. The replacement glass in the new windows is amazing and makes the landscape look much more vivid compared to the old windows.

The old sashes were two over two which broke up your field of view. So I went with a two over one sash. The top sash is also fixed in the